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**ORIGINAL**



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**REDACTED – FOR PUBLIC INSPECTION**

January 26, 2010

**EX PARTE OR LATE FILED**

Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW  
Washington, DC 20554

**FILED/ACCEPTED**

**JAN 27 2010**

**Re: GN Docket Nos. 09-47, 09-51, 09-137  
Ex Parte Notice  
Request for Confidential Treatment.**

Federal Communications Commission  
Office of the Secretary

Dear Ms. Dortch:

On Tuesday, January 26, 2010, Alcatel-Lucent voluntarily submitted material to Mr. Arnab Das of the Commission's Office of Strategic Planning and Policy Analysis, with an accompanying Request for Confidential Treatment. The information voluntarily provided to Mr. Das concerns signal-to-interference-plus-noise ratio ("SINR") data for mobile network deployments. The originals of the non-redacted documents were submitted directly to Mr. Das via email.

In accordance with the Commission's Protective Order in this proceeding, as revised November 16, 2009, DA 09-2415 (rel. Nov. 16, 2009), one copy of the original and two copies of the redacted version are being filed with the Secretary.

If you have any questions concerning this filing, please do not hesitate to contact me on 202-312-5901. Thank you.

Sincerely,

Paul W. Kenefick  
Vice President, Public Affairs  
Americas Region

cc: Arnab Das (via email)  
Elvis Stumbergs (via email)  
Simon Banyai (via email)

**HIGHLY CONFIDENTIAL INFORMATION – NOT FOR PUBLIC INSPECTION  
SUBJECT TO PROTECTIVE ORDER IN GN DOCKET NOS. 09-47, 09-51, 09-137  
BEFORE THE FEDERAL COMMUNICATIONS COMMISSION**



*Via Email*

**SUBJECT TO REQUEST FOR CONFIDENTIAL TREATMENT**

January 26, 2010

FILED/ACCEPTED

Arnab Das  
Office of Strategic Planning and Policy Analysis  
Federal Communications Commission  
445 Twelfth Street  
Washington, DC 20554

JAN 27 2010  
Federal Communications Commission  
Office of the Secretary

Re: **REQUEST FOR CONFIDENTIAL TREATMENT**  
Alcatel-Lucent Network Information

Dear Mr. Das:

The attached information, describing signal-to-interference-plus-noise ratio ("SINR") data for mobile network deployments, is provided at your request. By this letter, Alcatel-Lucent requests confidential treatment, pursuant to (1) Sections 0.457(d)(2) and 0.459 of the Commission's rules, 47 C.F.R. §§ 0.457(d)(2) and 0.459, and (2) the Protective Order of October 7, as amended November 16, 2009, *see* DA 09-2187 (rel. Oct. 7, 2009), *as amended* DA 09-2415 (rel. Nov. 16, 2009) (the "Protective Order"), for the attached presentation. (Some of the information was originally submitted to you on December 18, 2009; the instant request covers that submission as well.) The presentation is being filed voluntarily at the request of Commission staff. Unredacted and public redacted versions will be submitted with the Commission in accordance with the Protective Order.

The information contained in the presentation is commercially sensitive and concerns proprietary information that Alcatel-Lucent does not in the normal course of business reveal to the public or its competitors. Alcatel-Lucent thus requests that the presentation be withheld from public inspection under the Freedom of Information Act Exemption 4 ("FOIA Exemption 4"), 5 U.S.C. § 552(b)(4). Alcatel-Lucent below provides the following information required by Sections 0.457(d)(2) and 0.459(b) of the Commission's rules. For these reasons as well as those discussed below, this presentation consists of Highly Confidential Information pursuant to the Commission's Protective Order.

**HIGHLY CONFIDENTIAL INFORMATION – NOT FOR PUBLIC INSPECTION  
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- (1) Extent of Nondisclosure Requested. Alcatel-Lucent requests confidential treatment of the redacted portions of the presentation.
- (2) Proceeding/Reason for Submission. As noted above, the presentation is being filed voluntarily at the request of Commission staff. The submission relates to the following Commission dockets: GN Docket No. 09-47 (International Comparison and Consumer Survey Requirements in the Broadband Data Improvement Act); GN Docket No. 09-51 (A National Broadband Plan for our Future); and GN Docket No. 09-137 (Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act, A National Broadband Plan for Our Future).
- (3) Nature of Commercial and Financial Information. The SINR data information concerns technical performance data for mobile wireless deployments. The presentation contains commercially sensitive technical information that may be withheld from public disclosure under FOIA Exemption 4. The Commission has long recognized that, for purposes of Exemption 4, “records are ‘commercial’ as long as the submitter has a commercial interest in them.” *Robert J. Butler*, 6 FCC Rcd 5414, 5415 (1991), citing *Public Citizen Health Research Group v. F.D.A.*, 704 F.2d 1280, 1290 (D.C. Cir. 1983); *American Airlines v. National Mediation Board*, 588 F.2d 863, 868 (2d Cir. 1978). The information contained in the presentation clearly meets this standard. Moreover, this is clearly the type of information that the Commission has recognized may be entitled to nondisclosure. *See, e.g., 800 Data Base Access Tariffs and the 800 Service Management System Tariff and Provision of 800 Services*, Report and Order, 11 FCC Rcd 15227, ¶¶ 297-98 (1996) (providing confidential treatment to “pricing [and] capacity data that is obtained from equipment vendors and that constitutes sensitive pricing, engineering and technical information of those vendors.”). Finally, as a voluntary submission, the data is confidential and entitled to the protection of Exemption 4 as it is not “customarily” disclosed to the public. *Critical Mass Energy Project v. NRC*, 975 F.2d 871, 879 (D.C. Cir. 1992) (*en banc*).

For the foregoing reasons, and consistent with the Protective Order, the presentation should be classified as Highly Confidential Information for purposes of the Protective Order, as it consists of “detailed ... information” relevant to the “type, [and] cost of last-mile infrastructure.” Although Alcatel-Lucent itself does not offer broadband service, it is thus clearly the type of “information [that] should be afforded similar protection ....” *See* November 16<sup>th</sup> Protective Order at ¶ 6.

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- (4) Competitiveness of Market. Alcatel-Lucent is a manufacturer and developer of wireless and wireline network infrastructure. This marketplace is highly competitive, with many global competitors in the U.S. and abroad.
- (5) Harm from Disclosure. The commercial information in question is confidential because its release will likely cause substantial competitive harm to Alcatel-Lucent. In this regard, evidence revealing “[a]ctual competition and the likelihood of substantial competitive injury” is sufficient to bring commercial information within the realm of confidentiality.” *Public Citizen Health Research*, 704 F.2d at 1291, quoting *Gulf & Western Industries v. U.S.*, 615 F.2d 527, 530 (D.C. Cir. 1979). Disclosure of the presentation information here would cause competitive harm to Alcatel-Lucent by providing competitors with insight into the internal business methods and analytical methodologies used in the company’s own business planning.
- (6) Measures Taken to Prevent Unauthorized Disclosure. Alcatel-Lucent treats this information as highly confidential, and does not publicly disclose this information. In addition, within the company distribution is limited to employees on a “need to know” basis.
- (7) Public Availability. This information is not available to the public, and has not previously been disclosed to third parties (other than agents of Alcatel-Lucent on a “need to know” basis, such as outside counsel).
- (8) Requested Duration of Nondisclosure. Alcatel-Lucent believes the redacted information should be permanently withheld from public disclosure, given the highly sensitive nature of the information.

For the foregoing reasons, Alcatel-Lucent respectfully requests that the Commission withhold the attached information from public inspection. Please contact the undersigned at (202) 312-5901 if there are questions concerning this request.

Sincerely,

/s/

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Paul Kenefick

cc: Elvis Stumbergs (via hand delivery)  
Simon Banyai (via hand delivery)

Attachment (public version to be redacted)

# SINR distribution differences in a Multi-Cell Layout between Omni-directional and Directive Antennas.



T. Billon and R. Soni

*NGMA BTS SAE, Advanced Technologies, and Performance Expertise Center*

Alcatel-Lucent

December 2009

## High Level Parameter Assumptions

| Assumptions                        |  |
|------------------------------------|--|
| Parameter                          |  |
| Transmission mode                  |  |
| Shadowing                          |  |
| correlation shadow                 |  |
| correlation distance               |  |
| Topology                           |  |
| ISD                                |  |
| Profile                            |  |
| BS height                          |  |
| UE height                          |  |
| Penetration Loss                   |  |
| Frequency                          |  |
| Path Loss Parameter:<br>K1(700Mhz) |  |
| Path Loss Parameter:<br>K2         |  |

| Assumptions         |  |
|---------------------|--|
| BTS power           |  |
| UE Noise Figure     |  |
| BTS Antenna gain    |  |
| Omni Antenna Gain   |  |
| Directive Antenna   |  |
| UE Antenna Pattern  |  |
| BTS Antenna Pattern |  |

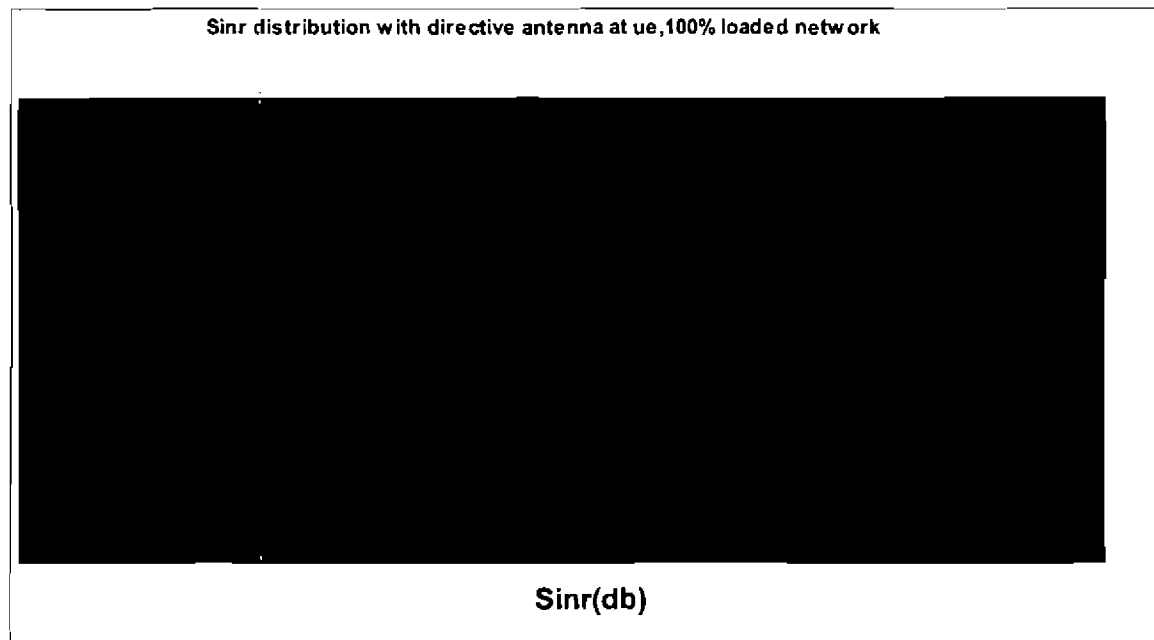
## Scattering/Fading Model Used

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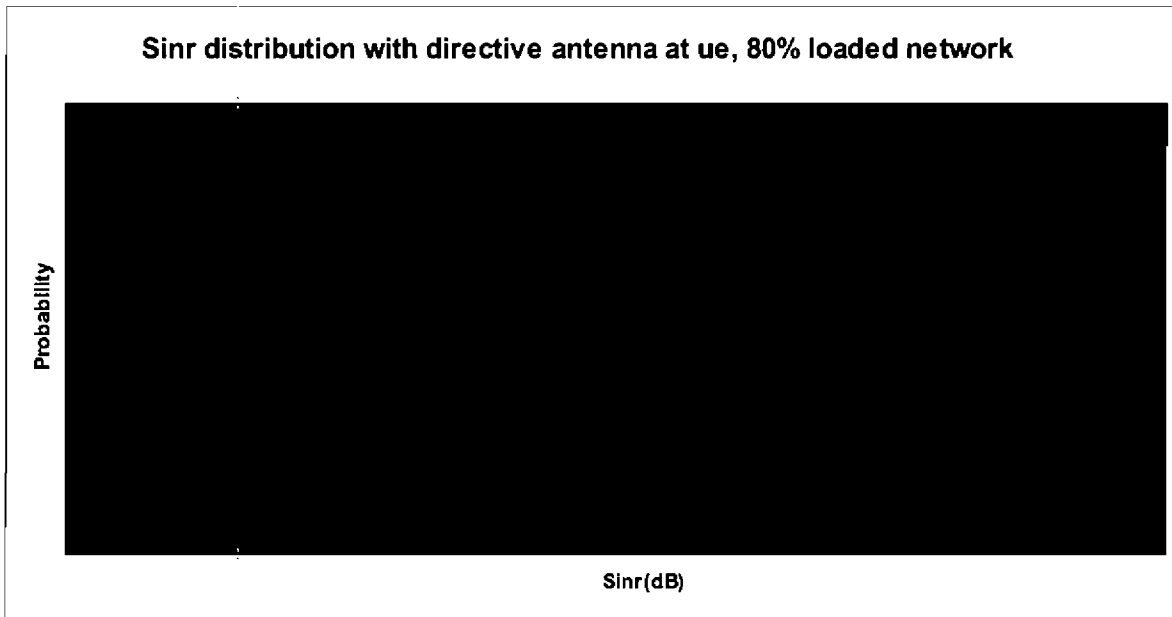


SINR distribution: 100% loaded network, omni and directive CPEs with and without fading (SISO is without fading, TX DIV is with fading)



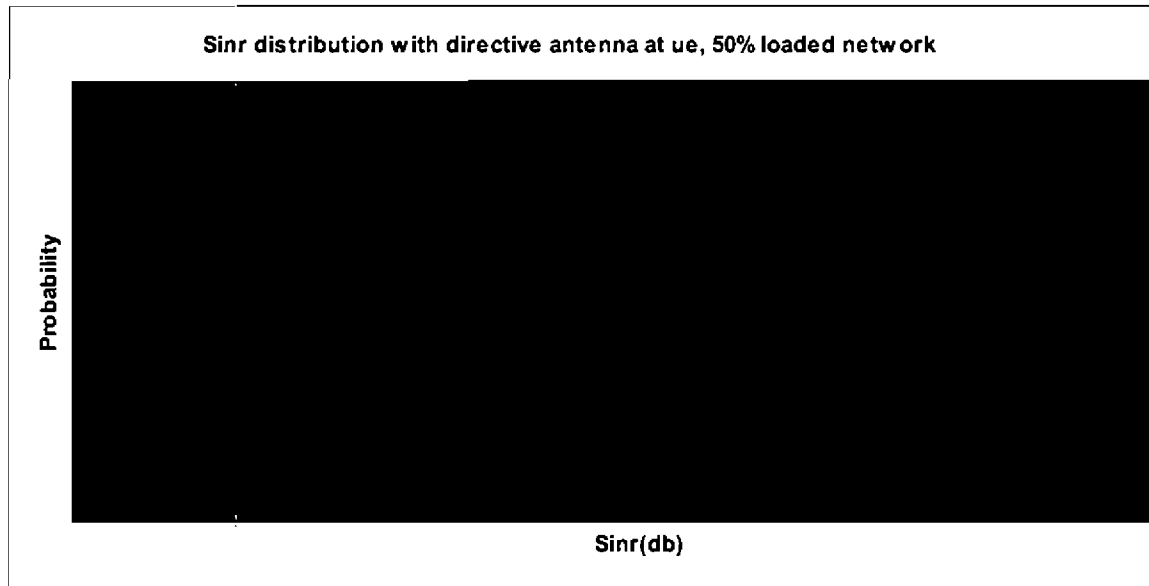


SINR distribution: 80% loaded network, omni and directive CPEs with and without fading (SISO is without fading, TX DIV is with fading)



SINR distribution: 50% loaded network, omni and directive CPEs with and without fading (SISO is without fading, TX DIV is with fading)

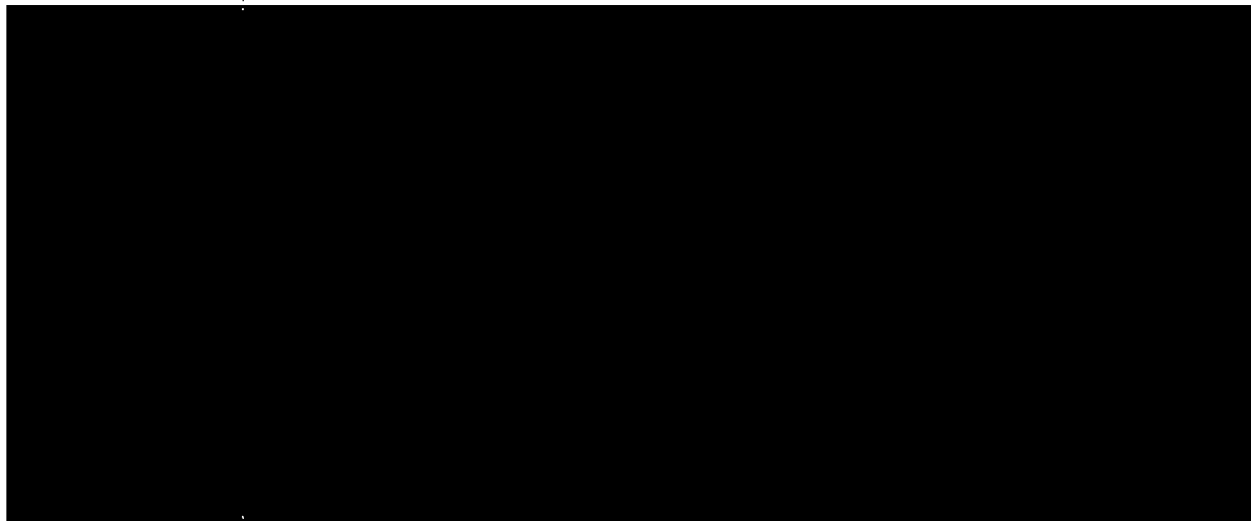
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**SINR distribution: 0% loaded network, omni and directive CPEs with and without fading (SISO is without fading, TX DIV is with fading)**

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**Sinr distribution with directive antenna at ue, 0%loaded network**



SNR (dB)

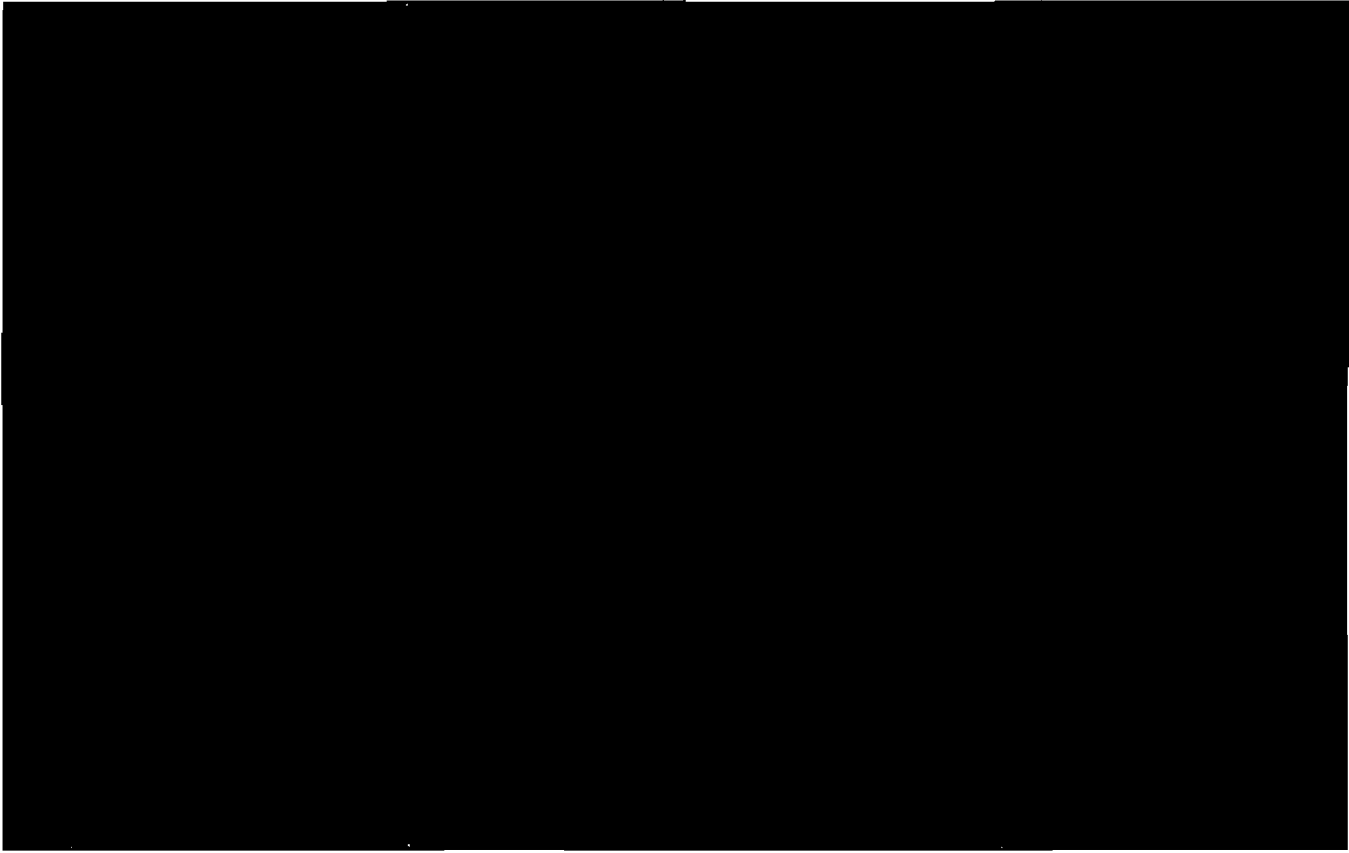
A blue banner with a subtle pattern of concentric circles and wavy lines. The text "www.alcatel-lucent.com" is centered in white.

[www.alcatel-lucent.com](http://www.alcatel-lucent.com)

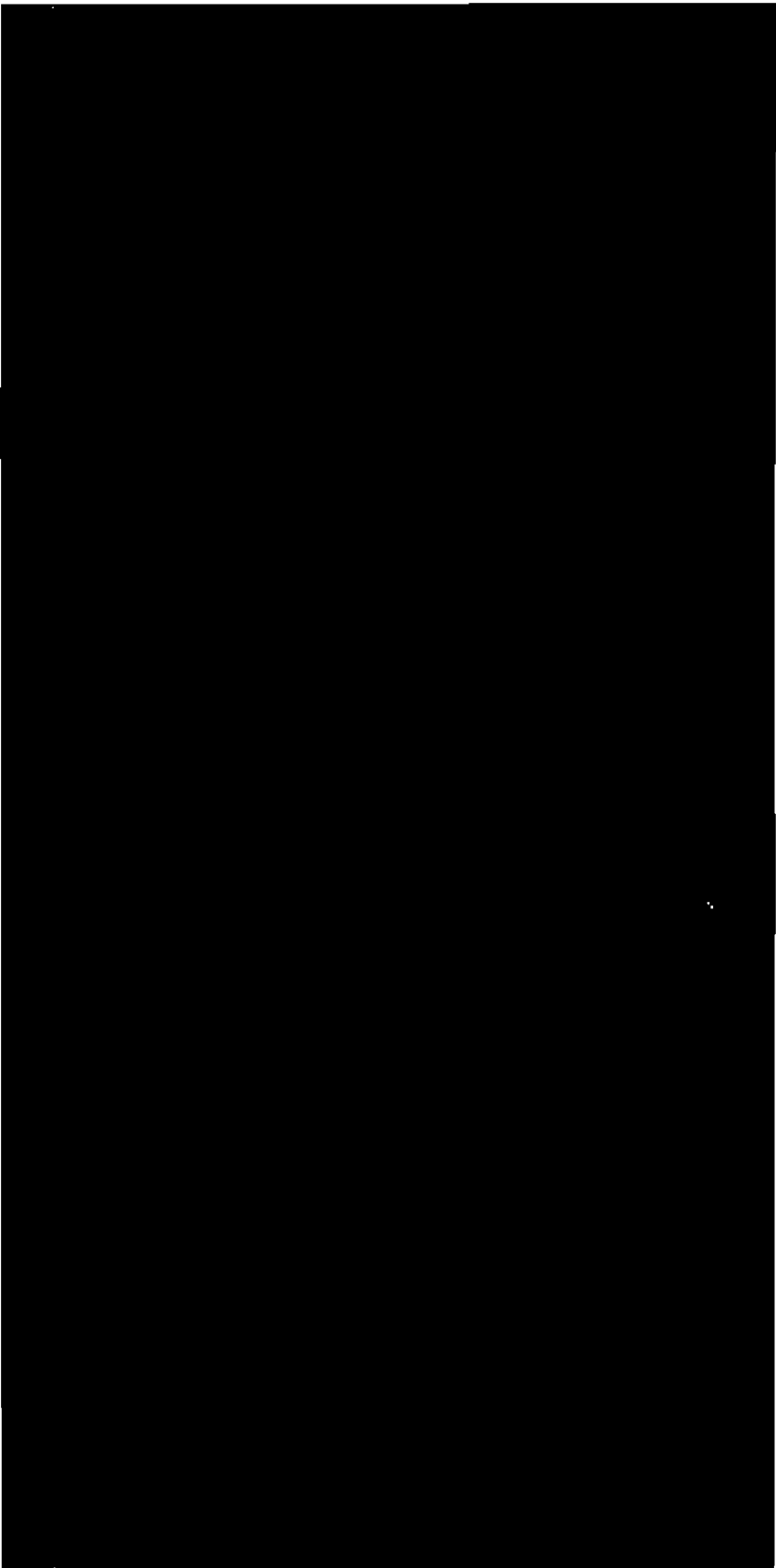
| Parameters           |  |
|----------------------|--|
| Parameter            |  |
| Transmission mode    |  |
| Shadowing            |  |
| Transmission shadow  |  |
| Transmission delay   |  |
| Topology             |  |
| BS                   |  |
| Power                |  |
| BS height            |  |
| UE height            |  |
| Penetration Loss     |  |
| Frequency            |  |
| Path Loss Parameter  |  |
| K1/70dBm             |  |
| Path Loss Parameter  |  |
| K2                   |  |
| BTS power            |  |
| UE Noise Figure      |  |
| BTS Antenna gain     |  |
| Carrier Antenna Gain |  |
| Direction Antenna    |  |
| UE Antenna Pattern   |  |
|                      |  |
| BTS Antenna Pattern  |  |



Omni Ue 100 Omni Ue 100 directive Ue : directive Ue TX, DIV: 100 Omni Ue 23.5 Omni Ue : TX, directive Ue : Directive Ue test feeding TX, Omni Ue 23.5 Omni Ue : TX, directive : antenna Directive antenna of Ue : TX, DIV: 50% LOA Omni Ue Omni Ue : TX directive ante directive antenna of Ue : test feeding TX, DIV: 0 % LOA

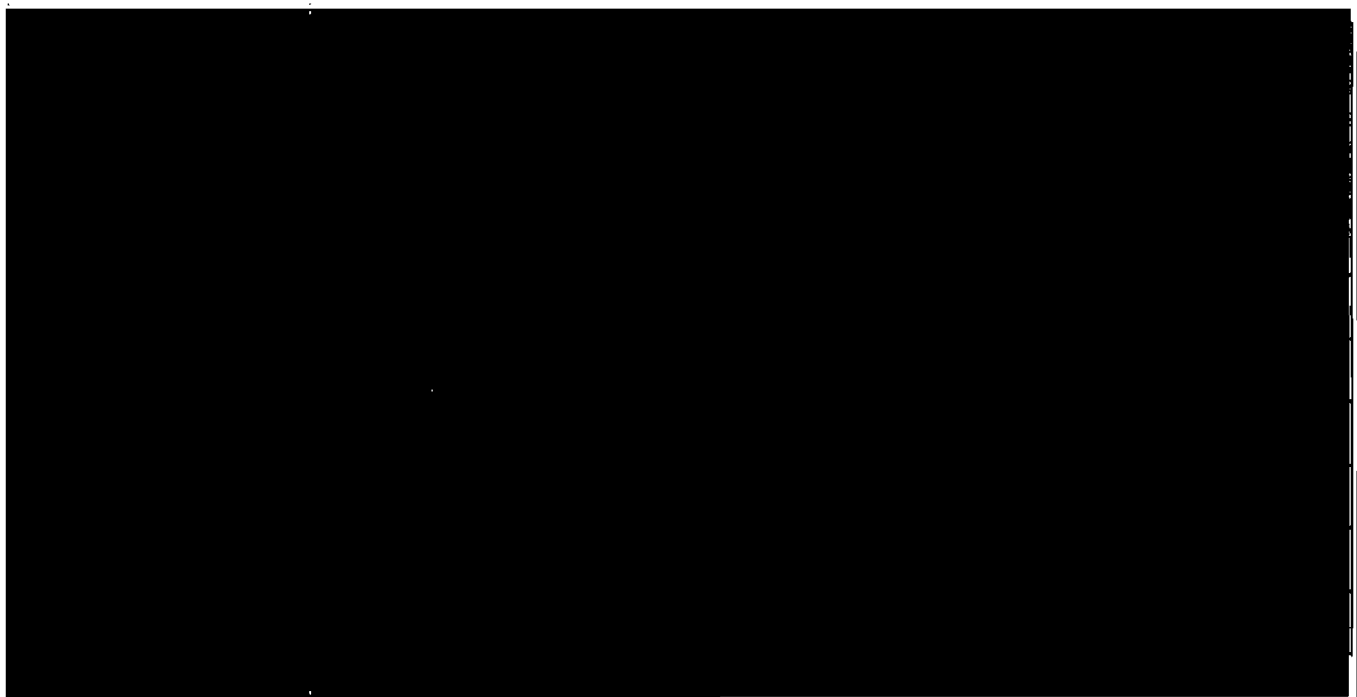


**Sinr distribution with directive antenna at ue, 100% loaded network**



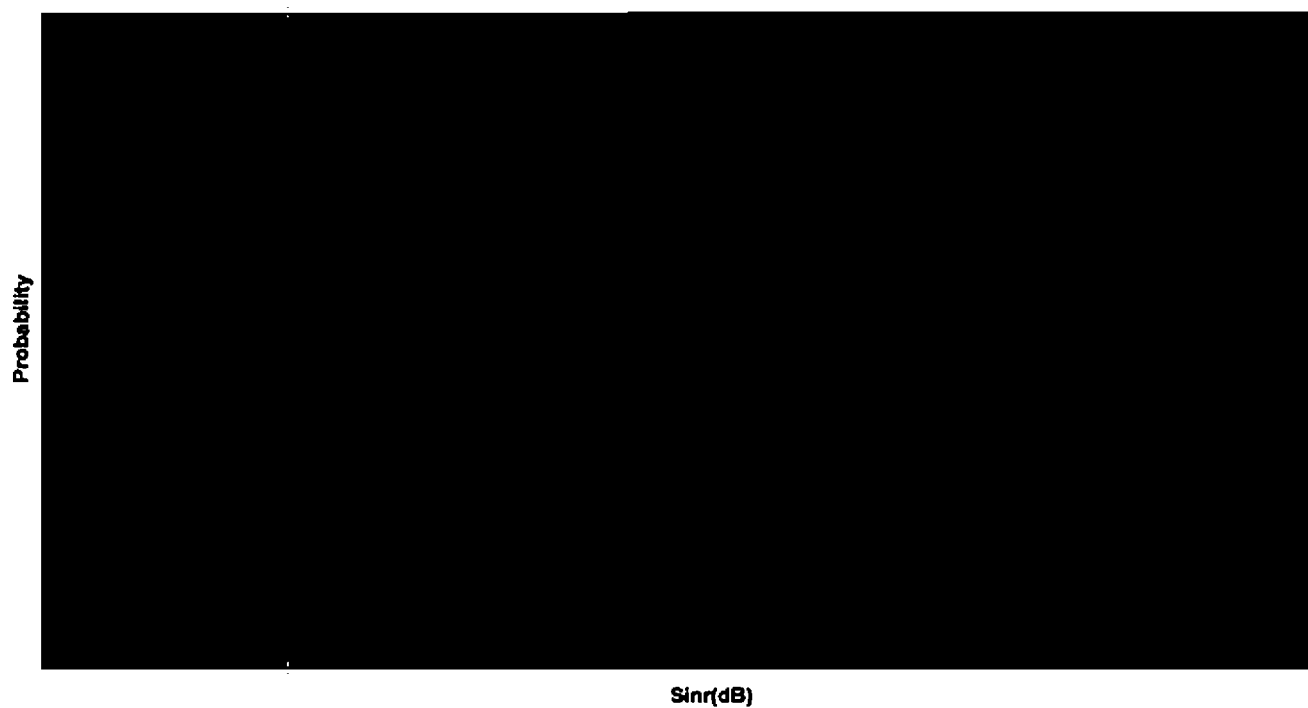
**Sinr(db)**

**SInr distribution with directive antenna at ue, 0% loaded network**





### Sinr distribution with directive antenna at ue, 80% loaded network



**SINR distribution with directive antenna at uc, 50% loaded network**

